# Internet Adoption on Indonesian Small and Medium-Sized Enterprises

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## ABSCTRACT

Small and Medium Enterprises (SMEs) is one of considered economic sectors in Indonesia because of its contribution to Indonesian economics. This research is aimed to present the differences of perceptions and group attitudes of the SMEs owners who participated in the training of internet utilization before and after the training which was held in University of Gunadarma in Depok and Bekasi. The method of research uses a self-reported level of adoption measurement. This research also uses a model of adoption measurement and the intensity of actual internet utilization which is measured based on the internet utilization activities. Based on the result of observation, it can be concluded that there is a level of internet adoption : adopter, potential adopter, and non adopter before and after the SMEs training in Depok and Bekasi and it can be concluded that internet adoption can give positive effect to the Owners of SMEs.

**Key words** : Training of *online* blog, Small and Medium Industry, Level of Internet Adoption, *Technology Acceptance Model*, Organization Innovation

## INTRODUCTION

Small and Medium Enterprises (SMEs) is one of considered economic sectors in Indonesia because of its contribution to Indonesian economics. It can be seen from its role to the growth of national economics, national gross product (NGC) has been achieved, national added value, and employment. There are five major weaknesses of small industries in Indonesia according to the Group of SMEs . They are ; market orientation; quality of human resource, technology domination, market access, and capital. These are because of the limited utilization of dynamic information technology and developing small businesses.

Globally, the purpose of this research is to identify the differences of adoption level and attitude in using information technology to the owner/organizer of small and medium enterprises in Depok and Bekasi, and also to analyze the prediction model of internet adoption level by the owner/organizer of small and medium enterprises

before and after the SMEs training in Gunadarma University as the latest user with the use of discriminant analysis.

## RESEARCH METHOD

This research is divided into two stages : antecedent research and main research. The antecedent research is conducted to (1) describe the use of TIK by small entrepreneur consists of computer, mobile phone, and internet, and to (2) develop research instruments includes the assessment of research instruments validity and reliability. The main research is conducted to (1) analyze the effects of such factors to the computer utilization intensity especially before and after the training is held, and to (2) assess the models of technology adoption which is appropriate with the empiric condition of the small enterprise.

These two stages models of the research are also used by Bitler (2001). The first stage is connecting several company's attributes by the level of adoption (with biner scale, adopter and non-adopter), and then connecting that level of adoption with the company performance. Details of this research model can be seen in the picture below:

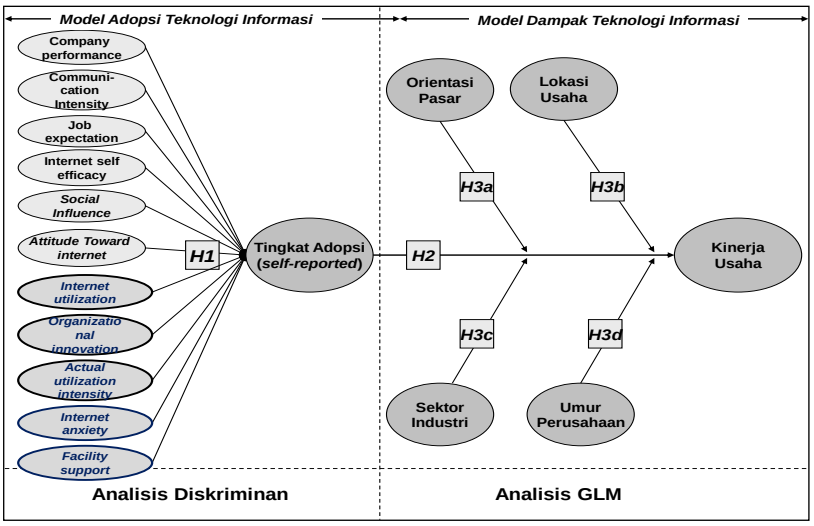


Figure 3.1.Self -Reported model of research (Budi Hermana, 2007)

The above model of research use the *self-reported* level of adoption measurement consists of three groups of adoptions: (1) *non adopter*, (2) p*otential adopter*, and (3) *adopter*. Variable being observed in this research consists of 7 groups, namely (1) 6 variables of predictor variable for the internet level of adoption, namely (a) performance expectation, (b) job expectation, ( c) social influence, (d)

facility support, (e) *internet self-efficacy*, and (f) *internet anxiety*; (2) individual characteristics, covered: (a) gender, (b) age, (c ) training experience, (d) level of education, and (e) experience of training and business; (3) attitude of utilization, level of adoption and actual utilization intensity; (5) Communication Intensity; (6) Organizational Innovation; and (7) company performance.

Analysis trial to test validity of questionnaire of this research is conducted using factor analysis of *SPSS version 11.5 for window*. Factor analysis provides the result of extract item questions become several components expected by the researcher. Principal of factor analysis is to grouping data according to intercorrelation of each item question. An item question in the questionnaire can be told as the factor former if the correlation value is bigger equal to 0,5 (Wahana komputer, 2005).

Whereas this research use the *SPSS version 11.5 for window*, analysis of *paired samples t test* which is a procedure used to compare averages of two variables in one *group*, this analysis is also useful to conduct a test to two couple samples of variables. The test is conducted to know if there are important differences between values before and after the training (Teguh Wahdoyo : 2009).

**DISCUSSION**

Figure of West Java population according to the types of jobs can be shown from the spread of working people according to the business field, is still dominated by agricultural sector, commerce, service, and industry. In general, the West Java economics growth increases 6, 41% higher compared to the national economics growth equal to 6, 2%.

Pledged area Bodebek (Bogor Regency, Bekasi, and Depok City), is focused to the industrial expansion, tourism, commerce, service, and also human resource which has an interrelationship with local resource, competitiveness, export oriented and environmental friendliness. In order to achieve such goals, there will be a website built for every export-oriented small enterprise. Then, they will be given a training to maintain their own websites. By the end of the research, it is expected that most of small business orienting export have already owned and exploit the internet technology to support their enterprises so that the purpose of this research can be reached.

The research instruments consist of five parts: (1) Individual characteristics of respondent; (2) Profiles about the enterprises managed by the respondents; (3) Respondents perception about internet refers to the models of acceptance of information technology; (4) Identification of resistor factor in the internet utilization; (5) Picture of the internet utilization by the respondents who have already used the internet. The eleven perception variables can be seen detail in the following table 1:

Table 1. Research variables for the model of internet adoption by the respondents

| No | Variables | Number of Item |
|---|---|---|
| 1 | Company Performance | 7 Items |
| 2 | Communication Intensity | 7 Items |
| 3 | Job Expectation | 4 Items |
| 4 | Internet-Self Efficacy | 5 Items |
| 5 | Social Influence | 4 Items |
| 6 | Attitude toward Internet | 4 Items |
| 7 | Internet Utilization | 3 Items |
| 8 | Organizational Innovation | 4 Items |
| 9 | Actual-utilization | 4 Items |
| 10 | Intensity of Internet Anxiety | 4 Items |
| 11 | Facility Support | 4 Items |

Before the data of the research is processed, the test of validity and reliability is conducted to know whether each of the attributes questioned in the questionnaire proper or not. The test of validity and reliability is conducted using *Software of SPSS 11.5 for window.*

Information about profiles of the respondents is needed to know about their initial condition and the pattern of perception and attitude toward internet utilization. Such information is needed to develop instruments and to pass the main research off

smoothly. The numbers of respondents in this research are 36. The age of the respondents ranges from 18 up to 57 years with average of 38, 21 years. Most of the respondents are married with the average percentage of 83, 33%.

This research use *SPSS version 11.5 for window* analysis of *paired samples t test* which is a procedure used to compare averages of two variables in one *group*, this analysis is also useful to conduct a test to two couple samples of variables. The test is conducted to know if there are important differences between values before and after the training (Teguh Wahdoyo : 2009). Results of data processing are presented in Table 2 below :

Table 2. Table Paired Samples Statistics

| | T-test | Sig. (2-tailed) |
|---|---|---|
| Pair Values before the training<br>Values after the training | Company Performance | 0,019 |
| | Communication Intensity | 0,000 |
| | Job Expectation | 0,010 |
| | Internet-Self Efficacy | 0,029 |
| | Social Influence | 0,000 |
| | Attitude toward Internet | 0,001 |
| | Internet Utilization | 0,001 |
| | Organizational Innovation | 0,064 |
| | Actual-utilization Intensity | 0,057 |
| | Internet Anxiety | 0,559 |
| | Facility Support | 0,097 |

From the data in Table 2, it can be concluded that effective variables in the internet adoption for SMEs are : *Company Performance* which obtained data Sig (2-tailed) equal to 0.019. The value is less than 0,05 therefore the variable of company performance is effective for SMEs in Bekasi and Depok before and after the training. *Communication Intensity* obtained data Sig (2-tailed) equal to 0.000, therefore, this variable is effective for SMEs. J*ob Expectation* obtained data Sig (2-tailed) equal to 0.010, therefore, this variable is effective for SMEs. *Internet-Self Efficacy* obtained data Sig (2-tailed) equal to 0.029, therefore, this variable is effective for SMEs. *Social Influence* obtained data Sig (2-tailed) equal to 0.000, therefore, this variable is effective for SMEs. *Attitude toward Internet* obtained data Sig (2-tailed) equal to

0.001, therefore, this variable is effective for SMEs. *Internet Utilization* obtained data Sig (2-tailed) equal to 0.001, therefore, this variable is effective for SMEs.

In contrast, the ineffective variables are : *Organizational Innovation* which obtained data Sig (2-tailed) equal to 0,064 where the result is more than 0,05 therefore this variable is ineffective for SMEs in Depok and Bekasi before and after the training. *Actual-utilization Intensity* obtained data Sig (2-tailed) equal to 0,057, therefore , this variable is ineffective for SMEs. *Internet Anxiety* obtained data Sig (2-tailed) equal to 0,559, therefore , this variable is ineffective for SMEs. *Facility Support* obtained data Sig (2-tailed) equal to 0,097, therefore , this variable is ineffective for SMEs.

## CONCLUSSION AND SUGGESTION

Conclusion of the research is the general picture of 36 respondents which shows that owners or the organizers of Small and Medium Enterprises (SMEs) in Depok and Bekasi have utilized the information and communication technology. Level of internet adoption (adopter, potential adopter, and non adopter) before and after the training of SMEs in Depok and Bekasi can be concluded that internet adoption is having positive effect to the owners of SMEs. There are eleven variables relate to the internet adoption, seven variables are effective variables (less than 0,005), they are namely : C*ompany Performance, Communication Intensity, Job Expectation, Internet-Self Efficacy, Social Influence, Attitude toward internet, Internet Utilization*. And four other variables are ineffective (more than 0,05): *Organizational Innovation, Actual-utilization Intensity, Internet Anxiety, and Facility Support.*

Several suggestions relate to the result of this research and those for the next research are: it is better to improve the lack of adoption for private computer and internet by giving training about internet. Discussion forum in the fitur of internet service is better to be used often because such forum can give knowledge about the development of corporate world and the owners of SMEs. It is also functioned to share and to exploit fear of internet utilization by owner of SMEs influenced by organizational and technical infrastructure. It can be minimized by giving knowledge about internet.

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